**Public Resources Advisory Group**

40 Rector Street, Suite 1600 New York, New York 10006-2908 (212) 566-7800

**MEMORANDUM TO:** Virginia Department of Transportation

**FROM:** Public Resources Advisory Group ("PRAG")

**SUBJECT:** Review of Detailed Proposals for I-81 Corridor Improvements

**DATE:** November 12, 2003

## Introduction

Pursuant to the Commonwealth of Virginia Public Private Transportation Act of 1995, the Virginia Department of Transportation ("VDOT") solicited conceptual proposals for the design, construction, improvement, maintenance and/or operation of all or part(s) of the Interstate 81 Corridor. VDOT received conceptual proposals from (i) Fluor Virginia, Inc. ("Fluor") and (ii) Safer Transport and Roadways ("STAR") Solutions in January 2003. The proposals were advanced to the next phase and each team submitted detailed proposals in September 2003. Both proposals involve implementing tolls on I-81 and issuing a significant amount of toll revenue bonds with Fluor adding one cars-only lane in each direction and additional passing lanes as necessary for high grades and STAR Solutions adding two dedicated truck lanes in each direction. STAR Solutions also proposes to use federal funds, including TIFIA loans, and state funds that have been designated in the Virginia Transportation Development Plan. VDOT will own, operate and maintain the facility unless VDOT chooses to have one of the team members maintain the facility, which is an option that both proposals offer as an additional service.

Presented below is PRAG's preliminary analysis of the proposals from a financial perspective. The review is based on the conceptual and detailed proposals, written materials from presentations made by the Fluor and STAR Solutions project teams on October 2, 2003 to the I-81 PPTA Advisory Panel and publicly available information, such Securities and Exchange Commission ("SEC") filings and investor and other information found on project team members' Websites. As we were requested not to have contact with any of the project team members, we have not had the opportunity to ask clarifying questions about the proposed plans of finance, underlying assumptions or financial information about the project teams.

## I. The Project

Interstate 81 is the longest interstate in the Commonwealth of Virginia, traversing 325 miles from the Virginia-Tennessee border in Bristol to the West Virginia border about 10 miles north of Winchester. Fluor and STAR Solutions propose to develop, design, build and finance the entire length of the corridor.

### A. Fluor Project

Fluor proposes to widen I-81 from four to six lanes with the additional two lanes dedicated to cars only. In addition, passing lanes will be added on steep grades. All vehicles traveling on I-81 will pay tolls. Fluor estimates the cost of the project to be $5.878 billion based on inflated dollars and assuming 3.0 percent annual inflation. Fluor assumes environmental work begins in January 2004 and construction begins in Fall 2006. The project is estimated to be completed in October 2014. The Fluor team plans to construct the project in five stages with each construction stage taking

24 to 36 months. As described below, there will be three different design-build teams and each will be responsible for approximately one-third of the corridor. Fluor states that dividing the project in this way is beneficial because it allows for simultaneous execution in each project area and an equal level of focus on each project area. Fluor is the principal member of the team and will have overall development obligations, serving as project developer, prime contractor and program manager, and will arrange project financing, legislative, public relations and environmental compliance support. There will be three design-build teams:

- Northern Corridor: Fluor-led team, assisted by Shirley Contracting Company
- Middle Corridor: Gilbert Southern Corp., one of the Kiewet family of companies
- Southern Corridor: A joint venture between Granite Construction Company and Lane Construction Corporation.

Other team members include Jacobs Engineering, Parsons Transportation Group and DMJM+Harris, Le Clair Ryan Consulting, LLC, Williams, Mullen, Clark & Dobbins, Reed Smith, Vollmer Associates, Virginia Tech Transportation Institute, Bear Stearns & Co., Inc., Charles Eden & Company and VMS.

Fluor assumes environmental work can begin at the beginning of 2004. The project has been divided into fifteen segments with each design-build team getting five segments of approximately 20 miles each. The overall project is to be broken down into five phases with three of the fifteen I-81 segments completed in each phase. Rural segments will be targeted for construction first, as they are expected to have less environmental impacts and take less time to complete the NEPA process. Phase 1 segments are expected to be opened in November 2008, with the phase 2 segments completed a year later. The phase 3 segments are expected to be completed in November 2011 and the phase 4 segments are expected to be completed in May 2013. The final phase is expected to be completed in October 2014.

B. STAR Solutions Project

STAR Solutions proposes to add two dedicated truck lanes in each direction and only trucks will pay tolls. In addition, STAR Solutions will provide a 20-year pavement warranty. The estimated cost of the project is $6.38 billion in 2003 dollars or $7.94 billion based on disbursement year dollars. STAR Solutions assumes work on the project is started in January 2004 and road and bridge construction on the first phase begins in January 2007 with completion of the entire project by April 2019. The project is planned for four phases spanning almost 15 years for engineering and construction.

The principal member of STAR Solutions is KBR, Inc., which is owned by Halliburton Company. KBR will be the project manager and coordinate the other members of the team and the activities involved in the project and will be the primary point of contact with VDOT. Other team members included APAC, Inc., Adams Construction Company, English Construction Company, Inc., Koch Performance Roads, Inc., Lehman Brothers, Morgan Keegan & Company, Citigroup Global Markets, Inc., W-L Construction & Paving, Inc. and Wilbur Smith Associates.

The STAR Solutions plan assumes execution of the Comprehensive Agreement at the beginning of 2004 and VDOT obtaining NEPA compliance by the end of 2004. The general approach is to make the I-81 improvements sequentially in four phases, although several tasks and activities will overlap or take place concurrently throughout the corridor, such as right-of-way activities, environmental permitting and design and engineering. Phase 1 (Lexington to Stauton) is expected to be complete by April 2009. Phase 2 (mileposts 156-180 and mileposts 227-252) completion is expected by October 2011. Completion of phase 3 (north to Rte 66 and south to north

of Rte 77) is expected by June 2015 and phase 4 (north to W. Virginia line and south the Exit 7) is expected to be completed by April 2019.

C. Rail Improvements Project

Both proposals also include rail improvements as an additional service that can be included in the I-81 improvement project and promote the improvements as a means to divert truck traffic to rail. Fluor estimates the rail improvements to cost $132.3 million and STAR Solutions estimates the cost to be $111 million. Both proposals propose to use a direct loan from the Railroad Rehabilitation Improvement Finance (RRIF) Program, which carries a 25 year term with interest rates set equal to the comparable maturity treasury rate. The loan would be repaid from user fees paid by Norfolk Southern for each trailer or box that uses the improved track section.

## II. Plan of Finance for I-81 Improvements

The cost of completing improvements to I-81 is substantial. The Fluor proposal estimates the cost to be $5.878 billion in inflated dollars, assuming an annual inflation rate of 3.0 percent and assuming environmental work begins in January 2004, construction begins in Fall 2006 and the project is completed in October 2014. STAR Solutions estimates the cost to be $5.720 billion in 2003 dollars plus an additional $660.5 million for the pavement warranty, resulting in a total project cost of $6.38 billion in 2003 dollars or $7.94 billion based on disbursement year dollars. STAR Solutions assumes work on the project is started in January 2004 and road and bridge construction on the first phase begins in January 2007 with completion of the entire project by April 2019. The following table compares the estimated cost of the project by the two teams.

**Estimated Project Costs**
($ millions)

| Fluor | | STAR Solutions | |
|---|---|---|---|
| Traffic Control/MOT | $ 308 | Environmental | $ 21.0 |
| Bridges | 969 | Engineering | 299.3 |
| Retaining Walls | 195 | Engineering and Program Management | 387.7 |
| Clearing and Grubbing | 66 | Geotechnical | 45.1 |
| Earthwork | 447 | Road/Bridge Work | 2,705.9 |
| Drainage | 478 | Pavement | 1,349.6 |
| Erosion Control | 42 | ITS/Weigh-in-motion | 94.8 |
| Pavement | 1,176 | Soundwall | 84.5 |
| Guardrails/Barrier | 172 | Tolling | 77.3 |
| Striping/Lighting/Signage | 77 | Inspection | 273.5 |
| Utility Relocations Allowance | 115 | Right of Way | 314.7 |
| Soundwalls | 15 | Utilities | 67.3 |
| Indirects/Mobilizations/Esc./Program Mgmt | 772 | **Subtotal** | **$ 5,720.6** |
| Rest Area Improvements | 8 | | |
| Wireless Infrastructure | 22 | Pavement Warranty | $ 660.5 |
| Toll Systems | 236 | | |
| Design/Quality Assurance | 480 | **Total Project Costs** | **$ 6,381.1** |
| ROW Allowance | 300 | | |
| **Total Design/Build Cost** | **$ 5,878** | **Project Completion Target** | **April 2019** |
| **Project Completion Target** | **October 2014** | *Figures are in 2003 dollars. STAR Solutions states total cost is $7.9 billion in disbursement year dollars, but a breakdown is not provided.* | |
| *Figures reflect annual inflation rate of 3.0%.* | | | |

Fluor states that $53 million is included in their project cost for potential reimbursement at closing for funds spent at-risk during the development phase, including costs associated with preparation of the traffic and revenue study, preliminary design, environmental study support and preparation of the guaranteed maximum price.

Both proposals assume a significant amount of toll revenue bonds to finance the project costs. Fluor uses all toll revenue bonds, pay-as-you-go toll revenues and interest earnings on bond proceeds while STAR Solutions uses toll revenue bonds, TIFIA loans, CTB allocations, federal earmark funds, pay-as-you go toll revenues, interest earnings on cash balances and cash flow notes. A comparison of the sources and uses of each plan of finance is summarized below. A comparison of Fluor's and STAR Solutions' toll revenue bonds and revenue assumptions is also provided below.

**Comparison of Sources and Uses**
**Fluor v. STAR Solutions**
($ millions)

| | Fluor | STAR Solutions |
|---|---|---|
| **Sources of Funds** | | |
| Par (Toll Revenue Bonds) | $6,438.4 | $5,931.6 |
| Par (BANs/TIFIA) | 0.0 | 1,284.6 |
| Federal Earmarks | 0.0 | 1,600.0 |
| CTB I-81 Allocations | 0.0 | 98.0 |
| Net Toll Revenue | 150.0 | 901.7 |
| Investment Earnings | 428.5 | 214.2 |
| Cash Flow Notes Par Amount | 0.0 | 900.0 |
| Total Sources | $7,016.9 | $10,930.1 |
| **Uses of Funds** | | |
| Deposit to Construction Fund | $5,878.0 | $7,940.2 |
| Capitalized Interest | 430.6 | 874.2 |
| Debt Service Reserve Fund | 643.9 | 593.2 |
| Cost of Issuance | 64.4 | 141.1 |
| Insurance Premium | 0.0 | 229.2 |
| Toll Replacement Reserve Deposits through 2018 | 0.0 | 165.2 |
| Cash Flow Notes and Repayment | 0.0 | 936.0 |
| Total Uses | $7,016.9 | $10,879.1 |
| Cumulative Surplus at End of 2018 | na | $50.9 |

A. Discussion of Fluor Plan of Finance

Fluor proposes to finance the entire project with toll revenue bonds where tolls will be charged for both cars and trucks. Neither CTB funds nor federal appropriations are sought. The toll revenue bonds will be issued in 2006 and 2010. As the table shows, Fluor includes net toll revenues as a source of funds, which represents a portion of the toll revenue collected prior to completion of project and not needed to pay toll collection expenses or to be deposited into a reserve fund and available to pay project costs. Anticipated earnings on bond proceeds deposited into the construction fund, the debt service reserve fund and the capitalized interest fund are also included as a source of funds.

B. Discussion of STAR Solutions Plan of Finance

STAR Solutions plans to use primarily toll revenue bonds, bond anticipation notes that will be taken out with TIFIA loans, federal funds that are earmarked for dedicated lanes for Heavy Commercial Vehicles and funds that the CTB has allocated for I-81 Corridor projects in the Virginia Transportation Development Plan. These revenue sources total $8.91 billion. The plan of finance calls for four issues of toll revenue bonds in 2005, 2010, 2012 and 2015 to fund a portion of each phase of the project and four issues of bond anticipation notes to fund a portion of each phase of the project cost and to be taken out with TIFIA loans.

STAR Solutions also anticipates pay-as-you-go funding from interim tolls that will start to be collected on any phase of I-81 that has received full environmental clearance. This will generate toll revenues, which after paying operating expenses, debt service on bonds that have been issued, repaying TIFIA loans, and filling any required reserves, can be used to pay project costs. In addition, STAR Solutions states that investment income on cash balances in STAR Solutions' or 63-20 funds and accounts can be applied to project costs to the extent the funds are not needed to pay interest during construction or to fill up any required reserves. In the plan of finance, STAR Solutions also includes temporary short term cash flow notes to bridge working capital needs that may arise during the 15-year project construction period. As can be seen from the table above, a surplus of $50.9 million is generated through the end of 2018, with construction completed by April 2019.

C. Comparison of Toll Revenue Bonds and Revenue Assumptions

Below is a comparison of STAR Solutions and Fluor's structure of toll revenue bonds as provided in the proposals.

| | **Fluor** | **STAR Solutions** |
|---|---|---|
| Traffic Data | Vollmer Associates LP prepared traffic and revenue estimates based on VDOT reports of 2001 average daily traffic | Wilbur Smith estimates based on VDOT average daily traffic data from I-81 studies. Truck volume estimated for 1996 base year. |
| Toll Rates | 2012 Initial Toll Rate: cars - $0.025/mile<br>trucks - $0.085/mile<br>2014 Completion Toll Rate: cars - $0.05/mile<br>trucks - $0.17/mile<br>Increases: cars-$0.01/mile; trucks-$0.03/mile starting 2015 and every 5 years thereafter | Trucks Only.<br>Systemwide Early Toll: $0.123/mile (2007)<br>Completed Phase Toll: $0.274/mile (2009)<br>Increase: 2003-2018 - 3% per year and 2.5% thereafter.<br>By 2019, $0.368/mile |
| Annual Traffic Growth | Cars: Years 1-5: 3%; Years 6-10: 2.5%<br>After year 10: 1 to 2%<br>Trucks: Years 1-18: 2%; Years 19-28: 1.5%<br>After year 28: 1% | Wilbur Smith estimates through 2020.<br>(No detail on assumptions provided)<br>2021-2040: 2%; 2041-2050: 1.5%;<br>2051-2060: 1% |
| Toll Revenue | 2014: $378.8 million (1st year after completion)<br>2019: $515.8 million<br>2042-2048: $1,207.1 million<br>Average Annual Growth (2012-2048): 5.49%<br>Cumulative Net Revenue Available After Bonds Paid off (thru 2048): $3.75 billion | 2014: $277.0 million<br>2019: $417.0 million (1st year after completion)<br>2048: $1,510.3 million<br>Average Annual Growth (2012-2048): 5.13%<br>Cumulative Net Revenue Available through 2048: $6.46 billion |
| Toll Operations Cost | $10 million beginning 2012<br>3% annual increase | $11.9 million beginning in 2007<br>2.5% annual increase |
| Issuer | 63-20 Corporation | 63-20 Corporation |

| | Fluor | STAR Solutions |
|---|---|---|
| Year of Bond Issues | 2006: $3.46 Billion<br>2010: $2.97 Billion | 2005: $1.27 Billion<br>2010: $1.08 Billion<br>2012: $2.22 Billion<br>2015: $1.36 Billion |
| Total Par Amount | $6.43 Billion | $5.93 Billion |
| Revenue Pledge | Net revenue after toll collection costs | Net revenue after toll collection costs |
| Target Debt Service Coverage | Senior Debt: 1.50x<br>All Debt: 1.13x | Toll Revenue Bonds: 1.50x<br>All Debt: 1.18x – 1.21x |
| Final Maturity | 2006: 34 years<br>2010: 38 years | 40 years |
| Underlying Rating | Investment grade for senior bonds | Investment grade for senior bonds |
| Bond Insurance Premium | NA | 1.00% |
| Amortization | Interest only during construction and<br>Ascending debt service thereafter | Interest only for 5 years<br>Ascending debt service thereafter |
| Structure | Fixed rate senior current interest rate<br>and senior capital appreciation bonds<br>Subordinate capital appreciation bonds | Fixed rate senior current interest rate<br>and senior capital appreciation bonds |
| Interest Rate Assumption | Senior Current Interest Bonds: 6.00%<br>Senior Capital Appreciation Bonds: 6.50%<br>Subordinate CABs: 7.00% | 2005: 8/20/03 rates + 25 bps (TIC: 6.02%)<br>2010: 8/20/03 rates + 50 bps (TIC: 6.52%)<br>2012: 8/20/03 rates + 75 bps (TIC: 6.78%)<br>2015: 8/20/03 rates + 100 bps (TIC: 7.02%)<br>CABs: 50 bps premium |
| Reinvestment Rate | Capitalized Interest: 3.00%<br>DSRF: 4.00%<br>Construction Fund: 3.00% | Capitalized Interest: 2.75%<br>DSRF: 4.00%<br>Cash Balance: 2.00% |
| Capitalized Interest | Through construction period | Through completion date of each phase |
| Debt Service Reserve Fund | 10% of Bond Proceeds | 10% of Bond Proceeds |
| Bond Issuance Costs | 1.00% | 2.00% |

*Fluor Toll Revenue*. Fluor assumes that tolling will start on portions of the project as they are completed. In Fluor's proposal, the tolls will be imposed beginning on January 1, 2012, after the expected completion of the third stage. The initial toll rate will be $0.025 per mile for cars and $0.085 per mile for trucks. In 2014, upon completion of the project, the toll rates will double to $0.05 per mile for cars and $0.17 per mile for trucks. In 2015, the toll rates are increased by $0.01 per mile for cars and $0.03 per mile for trucks, with toll increases every five years thereafter. The proposal states that 2001 traffic count data was used but does not provide detailed information on traffic count projections. More detailed information on traffic counts would be helpful for analysis. Based on gross toll revenue information, it appears Fluor is assuming aggregate traffic growth of approximately 3.5 percent in the first five years after completion of the project; in the following 10 years, revenue grows by 2.1 percent (excluding the years with toll increases) with growth decreasing to 1.7 percent and 1.6 percent through 2043. After 2043, toll revenues show no growth. The average annual increase in toll revenues from 2012 through 2048 is approximately 5.49 percent. The cost of toll operations starts at $10 million in 2012 and increases by 3 percent each year.

Fluor proposes to issue the bonds in two tranches (2006 and 2010). With the 2006 bond issue interest is capitalized through 2011 and debt service is ascending thereafter to achieve 1.70 times debt service coverage. Approximately $1.63 billion is senior current interest bonds and $1.84 billion is senior capital appreciation bonds. Fluor also includes a taxable issue of $31 million to pay for IdleAire systems at commercial parking facilities, which is an option for an additional service Fluor proposes. For the purpose of this analysis we have not included the debt service payments associated with these taxable bonds. For the Series 2010 bonds, interest is capitalized through 2013 and debt service is ascending thereafter to achieve 1.13 times debt service coverage. This issue includes $373.6 million of senior current interest bonds, $1.05 billion of senior capital appreciation bonds and $1.55 billion of subordinate capital appreciation bonds. The annual average increase in total debt service, based on the two series of bonds, from 2014 through 2048 is 5.0 percent, and net available revenues after paying debt service accumulate to $3.75 billion by 2048. Debt service coverage on the senior bonds is 1.50 times and 1.13 times on all debt. For purposes of the bond sizing, available net revenues include both earnings on the debt service reserve fund each year and the release of the debt service reserve fund at the final maturity of each bond issue.

*STAR Solutions Toll Revenue.* STAR Solutions also assumes tolling will start before the completion of the entire project. In this proposal, only trucks will be required to pay the toll, which will first be imposed in 2007 at a rate of $0.123 per mile and when a phase is completed the rate will increase to $0.274 per mile. STAR Solutions has built in annual increases of 3 percent on the toll rates through 2018 with 2.5 percent increases thereafter. By the time the project is completed, the toll will be $0.368 per mile in 2019. The proposal states that Wilbur Smith provided the gross toll revenue estimates but details of these estimates were not provided. More detailed information on traffic counts would be helpful. From 2021 through 2040, traffic is assumed to increase by 2 percent each year then by 1.5 percent annually for the period 2041 through 2050 and by 1.0 percent from 2051 through 2060. The average annual increase in toll revenues from 2012 through 2048 is 5.13 percent. The cost of toll collections starts at $11.9 million in 2007 with 2.5 percent annual increases.

STAR Solutions assumes toll revenues bonds are issued in 2005, 2010, 2012 and 2015, totaling $5.9 billion. Interest is capitalized through the expected completion date of each phase and debt service is structured as ascending. The target debt service coverage for the toll revenue bonds is 1.50 times, and the bonds are structured to take into account earnings on the debt service reserve fund and the release of the debt service reserve fund at the final maturity of each bond issue. All toll revenue bonds have a senior lien. The annual average increase in total debt service from 2014 through 2048 is 4.6 percent, and net available revenues after paying debt service accumulates to $6.46 billion through 2048 and $14.06 billion by 2054.

The table on the following page compares the fully phased-in toll rates per mile assumed in the Fluor and STAR proposals to car and truck toll rates per mile from other comparable toll roads currently in operation.

**Comparison of Toll Rates[1] per Mile**

| Toll Road | Cars | Trucks[2] |
|---|---|---|
| Fluor Proposal (2014) | $0.050 | $0.170 |
| STAR Proposal (2019) | NA | $0.368 |
| Pocahontas Parkway | $0.170 | $0.511 |
| Dulles Toll Road | $0.061 | $0.150 |
| Dulles Greenway | $0.161 | $0.321 |
| Chesapeake Expressway | $0.125 | $0.250 |
| Delaware Turnpike | $0.182 | $0.355 |
| Orange-Orlando County Expressway (FL) | $0.023 | $0.055 |
| Florida Turnpike | $0.054 | $0.181 |
| Georgia 400 | $0.081 | $0.524 |
| Indiana Toll Road | $0.030 | $0.075 |
| Kansas Turnpike | $0.035 | $0.148 |
| JFK Memorial Highway (MD) | $0.100 | $0.350 |
| Garden State Parkway (NJ) | $0.022 | $0.080 |
| New Jersey Turnpike | $0.057 | $0.176 |
| New York State Thruway | $0.029 | $0.101 |
| Ohio Turnpike | $0.038 | $0.189 |
| Pennsylvania Turnpike | $0.041 | $0.151 |
| Southern Connector (SC) | $0.094 | $0.281 |
| West Virginia Turnpike | $0.043 | $0.130 |

(1) Assumes regular toll rates and does not take into account any discounts. Amounts are based on the total toll for traveling over longest distance of each roadway.

(2) Based on average of toll rates for all truck classifications.

D. STAR Solutions -- Other Funding Sources

STAR Solutions is also relying on other funding sources, including federal funds that are earmarked for I-81, TIFIA loans, CTB funds, pay-as-you-go funds and cash flow notes.

*Federal Earmarks:* The preliminary financing plan assumes receipt of $1.6 billion of federal funds that are earmarked for dedicated lanes for Heavy Construction Vehicles on I-81. STAR Solutions states that it will work with all necessary parties to secure ongoing earmarks for I-81 in future federal reauthorizations of TEA-21. STAR Solutions assumes that the $1.6 billion will be received over the next two federal surface transportation program authorizations. If these funds are used for I-81, then VDOT cannot use the funds for other projects.

*TIFIA Loans:* The plan of finance also calls for direct loans under the TIFIA program, which will also be non-recourse to the Commonwealth. STAR Solutions believes that the I-81 project is an attractive candidate for TIFIA assistance. The TIFIA loan will have a junior lien on net toll revenues and is structured to secure tax-exempt bond anticipation notes for construction financing. It is assumed that there will be four issues of BANs coinciding with the four issues of toll revenue bonds. Each TIFIA loan will be drawn one year after the end of construction of each phase and used to repay the BANs. STAR Solutions and VDOT will need to ensure that all requirements of the TIFIA program are met as the project proceeds so that TIFIA loans can continue to be drawn. The repayment of each TIFIA loan will be deferred until five years after the substantial completion of each phase with the final maturity 35 years after this. The plan of finance targets minimum coverage of 1.15x of aggregate debt service, which includes debt service on the toll revenue bonds.

*CTB Allocations:* STAR Solutions states that the Virginia Transportation Development Plan for 2004 through 2009 identifies about $114 million of resources that are allocated or planned for allocation for various projects on I-81, of which STAR Solutions assumes $98 million remains

unspent. STAR Solutions assumes that $98 million will be made available for project costs during 2004 through 2009 in equal annual amounts. In addition, STAR Solutions will agree to undertake reimbursement of all or a portion of VDOT contributions if additional toll financing capacity is available after the completion of the project or from excess toll revenues after the completion of the project.

*Pay-as-you-go Net Toll Revenues:* STAR Solutions proposes to collect an interim toll that will start to be collected on any phase of I-81 that has received full environmental clearance and that is still under construction. The interim toll will be replaced by the Completed Toll upon completion of the phase. In 2007, the interim toll is $0.123 per mile and is inflated by 3 percent each year. The completed phase toll is $0.274 per mile in 2009 and is also inflated by 3 percent each year, resulting in a toll of $0.368 per mile in 2019 when the project is completed. This will generate toll revenues, which after paying operating expenses, debt service on bonds that have been issued, repaying TIFIA loans, and filling any required reserves, can be used to pay project costs. STAR Solutions estimates that through 2018, approximately $3.03 billion of toll revenues will be collected, and after paying (i) toll collections costs ($164.2 million), (ii) debt service on toll revenue bonds ($ 1.81 billion) and (iii) loan payments on TIFIA ($148.0 million), approximately $901.7 million would be available to pay project costs.

*Cash Flow Notes:* STAR Solutions estimates that during the 15 years of project implementation there will be times when cash balances will provide limited levels of working capital. The plan of finance assumes $900 million of borrowing in the public credit markets to fund working capital needs in advance of proceeds coming from long term financing issues, which we assume to be the toll revenue bonds. STAR Solutions assumes a 3.0 percent interest rate, a 1.0 percent issuance cost and interest on the notes is paid from toll revenues.

## III. Financial Strength of the Proposers

### A. Fluor Team

The proposal states that each design-build team will provide completion guarantee and fixed price guarantee along with payment and performance bonds and liquidated damages for late completion for its portion of the project. Our analysis will therefore focus on Fluor, Gilbert Southern, Granite Construction Company and Lane Construction Corporation.

*Fluor Corporation:* Fluor Corporation is organized into five main operating segments: (i) Energy and Chemicals, (ii) Industrial and Infrastructure, (iii) Power, (iv) Global Services and (v) Government Services. The table on the following page presents selected financial highlights for Fluor Corporation, based on information supplied with the proposal and other publicly available information. Over the last three years, Fluor's total revenues have averaged approximately $9.4 billion. In 2002, Fluor reported net income of $164 million and cash flow from operations of $207 million. While net income was higher by $145 million in 2002 as compared to 2001, cash flow from operations was lower by $408 million. Management reports that the change in cash flow from operations between 2001 and 2002 was in large part due to decreased advances from affiliates in the Power segment resulting from the completion of a substantial number of projects. For the first half of its current fiscal year, Fluor reported total revenues of $4.32 billion and net income of $62 million. Fluor also shows $158 million of cash being used by (rather derived from) operations, which was primarily due to changes in non-cash items, such as receivables and payables.

**Fluor Corporation Financial Highlights ($Millions)**

| | As of: 6/30/03 (1) | As of: 12/31/02 | As of: 12/31/01 | As of: 12/31/00 (2) |
|---|---|---|---|---|
| Total Revenue | $4,320 | $9,959 | $8,972 | $9,423 |
| Net Income | $62 | $164 | $19 | $124 |
| Cash Flow from Operations | ($158) | $207 | $615 | $186 |
| Cash and Equivalents | $584 | $753 | $573 | $22 |
| Billed and Unbilled Receivables | $1,211 | $953 | $959 | $970 |
| Total Current Assets | $2,015 | $1,941 | $1,851 | $1,231 |
| Long-Term Assets | $1,232 | $1,201 | $1,240 | $1,470 |
| Total Assets | $3,247 | $3,142 | $3,091 | $2,701 |
| Current Liabilities | $1,654 | $1,756 | $1,811 | $1,604 |
| Long-term Debt | $144 | $18 | $18 | $18 |
| Other Long-term Liabilities | $477 | $485 | $473 | $446 |
| Total Liabilities | $2,276 | $2,258 | $2,302 | $2,068 |
| Stockholders' Equity | $971 | $884 | $789 | $633 |
| Current Ratio | 1.22 x | 1.11 x | 1.02 x | 0.77 x |
| Backlog | $10,463 | $9,709 | $11,506 | $10,012 |
| Stock Price, as of 10/27/2003 | $39.02 | | | |
| Market Capitalization | $3,186 | | | |

Notes:
(1) For the six-month period ending 6/30/2003.
(2) Fluor changed to a calendar-year basis of reporting financial results effective January 1, 2001 and for Comparison purposes, income and cash flow information is for the 12-month period ending October 31, 2001.

Fluor reports total assets of approximately $3.2 billion as of June 30, 2003, with approximately $2.0 billion of current assets. Fluor reports cash and equivalents of $584 million, down from the end of the 2002 fiscal year, and the current ratio (current assets to current liabilities) was 1.22 times. A factor contributing to the decrease was the use of approximately $55 million of cash for acquisitions to strengthen Fluor's Government Services and Global Services business segments. Fluor's liquidity has improved from 2000, where the company reported using short-term borrowings to provide operating liquidity. The company also reported as of June 30, 2003 access to $290 million in unutilized commercial paper lines of credit and a shelf registration statement for the offering of up to $300 million in long-term debt. Also as of that date, Fluor reported a backlog of approximately $10.4 billion, up from $9.7 billion at the end of 2002.

Fluor reports $144 million in long-term debt as of June 30, 2003. The increase from the end of 2002 is the result of an accounting change required by FASB to report as debt the value of certain lease arrangements that previously were only disclosed in the footnotes to its financial statements. Currently, Fluor's long-term debt is rated A3/A from Moody's Investors Service and Standard & Poor's, respectively. Stockholders' equity was $971 million as of June 30, 2003. Fluor's stock is traded on the NYSE and its stock price as of October 27, 2003 was $39.02 per share near its 52-week high of $40.82 per share earlier in October 2003. Based on outstanding shares of approximately 81.6 million, its current market capitalization is over $3.18 billion.

As part of the proposal submission, Fluor provided a letter indicating that St. Paul Fire and Marine Insurance Company, Fidelity and Deposit Company of Maryland, and Zurich American Insurance Company have provided Fluor with performance, payment and warranty bonds on an on-going basis and that St. Paul and F&D/Zurich, as co-sureties, have considered single projects up to $500 million, with up to $3 billion in total backlog.

*Gilbert Southern Corp.:* Gilbert Southern Corp. is a wholly-owned subsidiary of Kiewit Construction Group Inc., which is the construction unit of Peter Kiewit Sons Inc. Limited information was provided for Gilbert Southern Corp. as part of the conceptual and detailed proposals. No publicly available information was located for Kiewit Construction Group Inc. but SEC filings were available for Peter Kiewit Sons Inc., the ultimate parent. As such, financial highlights are also included for that firm.

The following table presents financial highlights for Gilbert. For the year ending 12/29/2001, the company reported total revenue of $789 million, net income of $53 million and cash flow from operations of $99 million. As of the end of 2001, Gilbert had total assets of $359 million, with current assets of $317 million and cash and equivalents of $206 million. The current ratio was 2.17 times. Gilbert reports no long-term liabilities and total stockholders' equity of $213 million. While Gilbert's financial position and liquidity is strong based on the forgoing information, more current financial information is needed to determine whether 2001 financial results are representative of its current financial condition. Gilbert provided a letter from Travelers as part of the proposal submission stating that it authorizes the firm to bid individual contracts up to $300 million.

**Gilbert Southern Corp. Financial Highlights ($Millions)**

| | As of: 12/29/01 |
|---|---|
| Total Revenue | $789 |
| Net Income | $53 |
| Cash Flow from Operations | $99 |
| Cash and Equivalents | $206 |
| Billed and Unbilled Receivables | $91 |
| Total Current Assets | $317 |
| Long-Term Assets | $42 |
| Total Assets | $359 |
| Current Liabilities | $146 |
| Long-term Liabilities | $0 |
| Total Liabilities | $146 |
| Stockholders' Equity | $213 |
| Current Ratio | 2.17 x |

*Peter Kiewit Sons Inc.:* As shown in the following table, Kiewit had total revenues of approximately $3.7 billion and net income of $193 million in 2002. Cash flow from operations for that year was $214 million. For the first half of its current fiscal year, Kiewit reported total revenues of $1.7 billion, net income of $47 million and cash flow from operations of $104 million. As of June 30, 2003, Kiewit's total assets were $1.76 billion. Its current assets were $1.3 billion, with $266 million as cash and equivalents. The current ratio was 1.82 times. Kiewit also reports $24 million of long-term debt, with an additional $47 million of long-term liabilities, most of which are deferred income taxes. Kiewit's long-term debt, primarily convertible debentures, is not rated by any of the major credit rating agencies. As of June 30, 2003, Kiewit reported stockholders' equity of $962 million. Kiewit's stock is publicly traded.

**Peter Kiewit Sons Inc. Financial Highlights ($Millions)**

| | As of: 6/30/03 (1) | As of: 12/28/02 | As of: 12/28/01 | As of: 12/28/00 |
|---|---|---|---|---|
| Total Revenue | $1,709 | $3,699 | $3,871 | $4,463 |
| Net Income | $47 | $193 | $175 | $179 |
| Cash Flow from Operations | $104 | $214 | $193 | $208 |
| Cash and Equivalents | $266 | $275 | $216 | $302 |
| Billed and Unbilled Receivables | $591 | $682 | $659 | $560 |
| Total Current Assets | $1,325 | $1,452 | $1,207 | $1,133 |
| Long-Term Assets | $435 | $424 | $387 | $293 |
| Total Assets | $1,760 | $1,876 | $1,594 | $1,426 |
| Current Liabilities | $727 | $813 | $678 | $622 |
| Long-term Debt | $24 | $24 | $25 | $12 |
| Other Long-term Liabilities | $47 | $44 | $56 | $96 |
| Total Liabilities | $798 | $881 | $759 | $730 |
| Stockholders' Equity | $962 | $995 | $835 | $696 |
| Current Ratio | 1.82 x | 1.79 x | 1.78 x | 1.82 x |

Notes:
(1) For the six-month period ending 6/30/2003.

For the periods reviewed, Kiewit's liquidity and financial position has been relatively stable, with cash and equivalents ranging between $200 and $300 million, cash flow from operations averaging approximately $200 million and a current ratio averaging approximately 1.80x. Kiewit also states that, while it presently does not have any committed bank credit facilities, it has in the past been able to borrow on satisfactory terms. No information was provided in its SEC filings concerning Kiewit's performance bonding capacity. However, the company did report that it has informal arrangements with several banks for the provision of letters of credit.

*Granite Construction Company and Lane Construction Corporation:* As previously discussed, the southern corridor is to be built by a joint venture of Granite Construction Company and Lane Construction Corporation. Granite Construction Company is a wholly owned subsidiary of Granite Construction Incorporated. As part of the proposal submission, financial statements were provided for Granite Construction Company for 2000 and 2001. Substantial publicly available information is available for Granite Construction Incorporated, and since Granite Construction Company accounts for more than 90% of Granite Construction Incorporated's revenues and approximately 85% of its assets, summary financial highlights are provided on Granite Construction Incorporated.

As shown in the following table, Granite had total revenue of $1.76 billion in 2002, with net income of approximately $50 million and cash flow from operations of $104 million. For the first half of its current fiscal year, Granite posted $772 million of revenue, with net income of $21 million and cash flow from operations of $29 million. Granite's assets totaled $1.03 billion as of June 30, 2003. Its current assets totaled $582 million, with $78 million as cash and equivalents. The current ratio was 1.59 times. Granite reports $131 million of long-term debt. Its debt is currently not rated by any of the major credit rating agencies. Stockholders' equity was $470 million as of June 30, 2003. Granite's stock is traded on the NYSE and its stock price as of October 27, 2003 was $19.50 per share near its 52-week high of $21.54 per share July 2003. Based on outstanding shares of approximately 41.5 million, its current market capitalization is approximately $810 million.

**Granite Construction Incorporated Financial Highlights ($Millions)**

| | As of: 6/30/03 (1) | As of: 12/31/02 | As of: 12/31/01 | As of: 12/31/00 |
|---|---|---|---|---|
| Total Revenue | $772 | $1,765 | $1,548 | $1,348 |
| Net Income | $21 | $49 | $51 | $56 |
| Cash Flow from Operations | $29 | $104 | $125 | $75 |
| Cash and Equivalents | $78 | $52 | $125 | $58 |
| Billed and Unbilled Receivables | $347 | $309 | $327 | $241 |
| Total Current Assets | $582 | $548 | $587 | $412 |
| Long-Term Assets | $456 | $436 | $343 | $300 |
| Total Assets | $1,038 | $984 | $930 | $711 |
| Current Liabilities | $365 | $327 | $339 | $232 |
| Long-term Debt | $131 | $132 | $131 | $64 |
| Other Long-term Liabilities | $72 | $69 | $41 | $38 |
| Total Liabilities | $568 | $529 | $511 | $333 |
| Stockholders' Equity | $470 | $455 | $419 | $378 |
| Current Ratio | 1.59 x | 1.67 x | 1.73 x | 1.78 x |
| Backlog | $1,931 | $1,856 | $1,377 | $1,120 |
| Stock Price, as of 10/27/2003 | $19.50 | | | |
| Market Capitalization | $810 | | | |

Notes:
(1) For the six-month period ending 6/30/2003.

Granite's liquidity and financial condition has been relatively stable over the last few years, although its current cash position might be somewhat limited given the size of the proposed project and the size of its joint-venture design/build partner Lane Construction Corporation. Granite does report that it has a $100 million bank revolving line of credit of which $98.7 million was available as of June 30, 2003. A letter of recommendation from Federal Insurance Company, Travelers Casualty and Surety Company of America and St. Paul Fire & Marine Insurance Company was submitted as part of the proposal indicating that Granite has been provided with performance, payment and warranty bonds, with individual bonds underwritten in excess of $200 million and participation in joint venture bonds exceeding $300 million.

Limited information was provided about Lane Construction Corporation. The following table summarizes financial highlights for 2000 and 2001. In 2001, Lane reported $418 million of revenue, with net income of $4 million and cash flow from operations of $18 million. As of December 31, 2001, Lane's assets totaled $143 million. The current assets totaled $78 million and the current ratio was 1.25 times. Lane reported $1 million of cash and equivalents. Lane reported long term debt of $12 million and $22 million of other long-term liabilities. Lane also reported stockholders' equity of $46 million. More current financial information would be needed to determine Lane's current financial condition. A letter of recommendation from Federal Insurance Company, Travelers Casualty and Surety Company of America and St. Paul Fire & Marine Insurance Company was submitted as part of the proposal indicating that Lane has been provided with performance, payment and warranty bonds, with individual bonds underwritten in excess of $200 million.

**Lane Construction Corporation Financial Highlights ($Millions)**

| | As of: 12/31/01 | As of: 12/31/00 |
|---|---|---|
| Total Revenue | $418 | $335 |
| Net Income | $4 | $4 |
| Cash Flow from Operations | $18 | $3 |
| Cash and Equivalents | $1 | $2 |
| Receivables | $54 | $41 |
| Total Current Assets | $78 | $64 |
| Long-Term Assets | $65 | $47 |
| Total Assets | $143 | $111 |
| Current Liabilities | $63 | $44 |
| Long-term Debt | $12 | $0 |
| Other Long-term Liabilities | $22 | $22 |
| Total Liabilities | $97 | $66 |
| Stockholders' Equity | $46 | $45 |
| Current Ratio | 1.25 x | 1.45 x |

B. STAR Solutions

KBR, Inc. is the leader of this project team. The proposal states that it will use its best efforts to secure a parent guarantee from Kellogg, Brown & Root, a wholly owned subsidiary of Halliburton Company. However, according to VDOT, STAR Solutions stated at the October 2, 2003 I-81 PPTA Advisory Panel that Halliburton would offer the parent guarantee. Financial statements for KBR, Inc. were not provided with the STAR Solutions proposal and could not be obtained through publicly available sources. The proposal did submit financial statements for Halliburton Company and additional information was obtained from publicly available sources. Since Halliburton will guarantee completion of the project, the focus of our analysis will be on that firm.

Halliburton currently is organized into five business segments, including its Engineering and Construction Group and four energy related business segments. The Engineering and Construction Group, which operates as KBR Halliburton, accounts for approximately half of Halliburton's revenues and approximately a quarter of its assets. Selected financial highlights for Halliburton are summarized in the following table.

**Halliburton Company Financial Highlights ($Millions)**

| | As of: 6/30/03 (1) | As of: 12/31/02 | As of: 12/31/01 | As of: 12/31/00 |
|---|---|---|---|---|
| Total Revenue | $6,659 | $12,572 | $13,046 | $11,944 |
| Net Income | $69 | ($998) | $809 | $501 |
| Cash Flow from Operations | ($213) | $1,562 | $1,029 | ($57) |
| Cash and Equivalents | $1,859 | $1,107 | $290 | $231 |
| Billed and Unbilled Receivables | $3,666 | $3,257 | $4,095 | $3,934 |
| Total Current Assets | $6,775 | $5,560 | $5,573 | $5,657 |
| Insurance for Asbestos/Silica Liabilities | $2,059 | $2,059 | $612 | $51 |
| Other Long-Term Assets | $5,188 | $5,225 | $4,781 | $4,484 |
| Total Assets | $14,022 | $12,844 | $10,966 | $10,192 |
| Current Liabilities | $3,317 | $3,272 | $2,908 | $3,915 |
| Long-term Debt | $2,374 | $1,181 | $1,403 | $1,049 |
| Asbestos/Silica Liabilities | $3,396 | $3,425 | $737 | $80 |
| Other Long-term Liabilities | $1,376 | $1,408 | $1,166 | $1,300 |
| Total Liabilities | $10,463 | $9,286 | $6,214 | $6,264 |
| Stockholders' Equity | $3,559 | $3,558 | $4,752 | $3,928 |
| Current Ratio | 2.04 x | 1.70 x | 1.92 x | 1.44 x |
| Stock Price, as of 10/27/2003 | $24.34 | | | |
| Market Capitalization | $10,659 | | | |

Notes:
(1) For the six-month period ending 6/30/2003.

Halliburton reported total revenues of almost $12.6 billion in 2002, with a net loss of almost $1.0 billion. The loss is largely due to one-time charges made in 2002 related to its pending global settlement of all its asbestos and silica personal injury claims (discussed later in this section) and to a corporate reorganization, although the firm also reported operating losses in addition to the one-time charges. Cash flow from operations in 2002, however, was $1.56 billion. For the first half of its current fiscal year Halliburton reported total revenue of over $6.6 billion and net income of $69 million. Halliburton shows $213 million of cash being used for operations during the first half of its current fiscal year, due to changes in non-cash items, such as receivables and payables, from the start of the year.

As of June 30, 2003, Halliburton's assets totaled $14 billion, comprised of $6.8 billion of current assets and $7.2 billion of long-term assets. Its current assets included over $1.8 billion of cash and equivalents, and the current ratio was 2.04 times. Halliburton is carrying $2.05 billion as a receivable for probable insurance recoveries for asbestos liabilities, currently estimated at approximately $3.4 billion. The $3.4 billion amount is the current accrual for probable and reasonably estimable liabilities for its current and future asbestos claims. The probable insurance recoveries and the current accrual for asbestos claims are included in non-current assets and liabilities, respectively, because of the extended time periods involved to settle claims.

Halliburton's credit ratings on the approximately $2.4 billion of long-term debt outstanding, as of June 30, 2003, are Baa2 (on watch for possible downgrade)/BBB (negative credit watch) from Moody's and S&P, respectively. An August 2003 report from Moody's confirming the Baa2 rating and outlook stated that the effect of the asbestos settlement related cash payments on Halliburton's financial and liquidity position was a factor considered in its review. Halliburton reported stockholders' equity of approximately $3.6 billion as of June 30, 2003. Halliburton's stock is traded on the NYSE and its stock price as of October 27, 2003 was $24.34 per share near its 52-week high

of $26.70 per share earlier in October 2003. Based on outstanding shares of approximately 437.9 million, its current market capitalization is approximately $10.65 billion.

In December 2002, Halliburton announced an agreement in principle to resolve all of its present and future personal injury asbestos claims. The proposed agreement would require Halliburton to pay into one or more trusts $2.775 billion in cash, 59.5 million shares and notes with a present value expected to be less than $100 million. A November 2003 revision to the agreement capped the cash contribution to the settlement at $2.775 billion. The agreement is conditioned on a "pre-packaged" bankruptcy filing under Chapter 11 for certain Halliburton subsidiaries named as defendants in asbestos lawsuits, including Kellogg, Brown & Root, which must occur by December 31, 2003. However, the settlement plan also requires the approval of at least 75% of known present asbestos claimants, which must occur before the reorganization plan is filed. The firm expects the Chapter 11 filing to occur sometime in December 2003 but there is no guarantee that it will be approved by a sufficient number of claimants before the end of the year.

Assuming the agreement is approved by the asbestos claimants, it will not be final until it is approved by the bankruptcy courts and Halliburton actually finances its required payments to the trusts. While the settlement would resolve a potentially open-ended liability, funding the agreement will be costly. It will require additional borrowing and could affect the firm's liquidity in the future. In addition to potential impact the settlement could have on Halliburton's financial condition, VDOT should seek clarification about the relationship between KBR, Inc. and Kellogg, Brown & Root and about whether a bankruptcy filing by Kellogg, Brown & Root's would affect KBR, Inc.'s ability to perform under any agreement it reaches with CTB regarding I-81.

A related issue is the Chapter 11 filing would also constitute an event of default under a contract between Kellogg Brown & Root and Barracuda & Caratinga Leasing Company B.V. (the project owner) to develop the Barracuda and Caratinga crude oil fields off the coast of Brazil. This would allow the project owner to draw on performance letters of credit of approximately $266 million unless Halliburton obtains a waiver from the project owner. (Halliburton is guaranteeing Kellogg Brown & Root's performance and a retainage letter of credit has also been provided.) The bankruptcy filing would also constitute an event of default under the project owner's loan agreements which could cause the lenders to cease financing the project. Furthermore, if after arbitration Kellogg Brown & Root is determined to be in default under the contract and cannot complete the project, the project owner could seek damages (including completion costs in excess of the contract price and interest on borrowed funds) for up to $500 million plus the return of up to $300 million in advance payments. While the firm believes these events would be unlikely, their occurrence would have a material adverse effect on Halliburton's financial condition.

In relation to the above project, Halliburton, Kellogg Brown & Root and Petrobras (Petrolo Brasilero SA, the Brazilian national oil company and project manager), acting on behalf of the project owner, are in discussions concerning disputes over delays in the project's completion, which could lead to the payment of liquidated damages. Halliburton's position is that the delays are primarily due to the actions of the project owner. Halliburton has also disclosed that it is the subject of a formal SEC investigation into the firm's accounting practices related to cost overruns and unapproved claims on long-term engineering and construction projects. The firm believes that it has followed widely accepted accounting practices but the SEC could conclude otherwise.

We recommend that VDOT request clarification on the above issues, particularly the effects of the Chapter 11 bankruptcy.

## IV. Allocation of Responsibilities and Risks

### A. Risks Associated with Tolling

A risk for both proposals is approval of tolls on an existing interstate highway by the FHWA and the General Assembly of the Commonwealth. According to the proposals, the FHWA has granted VDOT conditional provisional acceptance for tolling under Section 1216(b) of TEA-21. Assuming approval for placing tolls on an existing facility is given, each proposal relies on the ability to issue an unprecedented amount of toll revenue bonds. In the case of Fluor, a total amount of $6.4 billion is expected to be issued and with STAR Solutions, $5.9 billion is expected to be issued. The creditability of the revenue estimates will help determine the ability to obtain investment grade ratings for the required amounts and the ability to sell the large amount of unrated subordinated debt in the Fluor proposal and achieve the required level of TIFIA funding. In addition, since the toll revenue bonds will be issued in the future in different tranches, increase in interest rates is another risk. However, assuming bonds are issued, the risk that toll revenues may not be sufficient to pay debt service is borne by the purchasers of the toll revenue bonds. The Commonwealth and VDOT will not have any financial or legal obligation but obviously would only want to sponsor a project with a high probability of success.

### B. Fluor and STAR Solutions Allocation of Risks and Responsibilities

The table below summarizes the allocation of risks and responsibilities for each proposal with more detail on each proposal following.

| | Fluor | STAR Solutions |
|---|---|---|
| Guaranteed Fixed Price | Each design build team will provide | Intent of KBR to provide |
| Guaranteed Completion Date | Each design build team will provide | Intent of KBR to provide |
| Parent Guarantee | Northern Corridor: Fluor<br>Middle Corridor: Gilbert Southern<br>Southern Corridor: Granite and Lane | Halliburton Company |
| Payment and Performance Bonds | Each design build team will provide | KBR will provide |
| Liquidated Damages | Each design build team will provide | KBR will provide |
| Incentive Payment for Early Completion | Not specified | STAR Solutions proposes to include early completion bonds based on net revenues that are collected as a result of early completion. |
| Pre-development Expenditures | Estimate $53 million will be spent at risk during development phase | State team's pre-development costs are "at risk" until Comprehensive Agreement is signed |
| Warranty | Anticipate providing warranties for workmanship and materials | 20-year pavement warranty from Koch Performance Road, Inc. at a cost of $660.5 million.<br>5-year warranty on performance of work not covered by pavement warranty |
| Letter of Credit | Fluor will consider taking risk position in the transaction to mitigate revenue realization risk. | Koch Performance Roads, Inc. will provide a $100 million line of credit as backstop for debt service to be paid until entire project is completed (subject to final approval). |
| Toll Collection Costs | Fluor will provide toll system operation contract with an initial contract of 5 years and 3 additional 5 year options. | STAR Solutions responsible for administrative functions associated with toll collection and financing operations. |

| | Fluor | STAR Solutions |
|---|---|---|
| VDOT Responsibilities/Risks | Share information from current design contracts, NEPA process, approve design exceptions, exercise power of eminent domain, attend public meetings, regulatory agency coordination, address tolling concept in Tier 1 EIS, maintenance, law enforcement, legal liability. Ownership and maintenance responsibilities upon completion of the project. Option to use VMS for maintenance. | Right-of-way, public safety, law enforcement, environmental approvals, hazardous materials. Asset management (other than pavement under warranty and toll facilities), including maintenance responsibilities. |

C. Fluor

Each design-build team will be a subcontractor to Fluor in its role as prime contractor and program manager. Fluor will be responsible to VDOT as developer and as program manager. Each design-build team will be responsible for the design and construction of their designated section of the corridor. The design-build teams will not be liable for the work of the other two design-build teams. Each design-build team will provide completion guarantee and fixed price guarantee along with payment and performance bonds and liquidated damages for late completion for its portion of the project. Letters have been provided from several sureties stating the established relationships between the construction contractors on the team and their bonding companies. Fluor provided a letter indicating that St. Paul Fire and Marine Insurance Company, Fidelity and Deposit Company of Maryland, and Zurich American Insurance Company have provided Fluor with performance, payment and warranty bonds on an on-going basis and that St. Paul and F&D/Zurich, as co-sureties, have considered single projects up to $500 million, with up to $3 billion in total backlog. Gilbert provided a letter from Travelers stating that it authorizes Gilbert to bid individual contracts up to $300 million. Granite provided a letter of recommendation from Federal Insurance Company, Travelers Casualty and Surety Company of America and St. Paul Fire & Marine Insurance Company stating that Granite has been provided with performance, payment and warranty bonds, with individual bonds underwritten in excess of $200 million and participation in joint venture bonds exceeding $300 million. Lane submitted a letter of recommendation from Federal Insurance Company, Travelers Casualty and Surety Company of America and St. Paul Fire & Marine Insurance Company indicating that Lane has been provided with performance, payment and warranty bonds, with individual bonds underwritten in excess of $200 million. In addition, it is anticipated that warranties for workmanship and materials will be provided.

Fluor also states that it is willing to share the upfront development risks with VDOT. Included in the project costs is $53 million, which Fluor estimates to be spent at-risk during the development phase, including costs associated with preparation of the traffic and revenue study, preliminary design, environmental study support and preparation of the guaranteed maximum price. Fluor also states that it will consider taking a risk position in the transaction to mitigate revenue realization risk, as it did with the Pocahontas Parkway transaction, where the partners of the joint venture provided a revolving line of credit of $5 million to be available to pay debt service in the event of insufficient funds to pay debt service.

D. STAR Solutions

STAR Solutions states that its intent is to provide guaranteed negotiated prices for each phase of the project and to provide guaranteed completion date for each phase, subject to items such as force majeure and scope changes. The proposal states that KBR will use its best efforts to supply a

parent company guarantee from Kellogg, Brown & Root to support the guaranteed fixed price and completion date. KBR will also provide a payment and performance bond and limited liquidated damages if the project is not completed on time. The amount to be provided or potentially available is not provided. According to VDOT, at the October 2, 2003 Advisory Panel meeting STAR Solutions stated that Halliburton would offer the parent guarantee. This will need to be confirmed. STAR Solutions also proposes to include incentives for early completion to be funded with net revenues collected due to earlier completion. In addition, a five-year warranty on the performance of the work not covered by the pavement warranty, described below, will also be provided.

STAR Solutions states that it continues to spend millions to develop the I-81 project and these pre-developments costs are at risk until the execution of the Comprehensive Agreement. Koch Performance Road, Inc. is offering to provide a 20-year pavement warranty, which STAR Solutions sees as a significant contribution of equity, although there is a cost of the warranty of $660.5 million. The proposal states that the 20-year pavement warranty will reduce future pavement maintenance expenses that would have been incurred by VDOT in excess of the cost of the warranty. The proposal states that the warranty is identical to making a direct capital commitment since the total amount of the warranty is carried as a liability on Koch Performance Road, Inc.'s balance sheet and therefore, ties up the funds and eliminates their use on other corporate activities. Financial information on Koch was not provided in the proposal.

Subject to certain approvals, refinement of the financing plan, confirmation of traffic and revenue projections in investment grade feasibility studies and receipt of investment grade ratings on the toll revenue bonds, Koch Performance Road, Inc. will also provide up to a $100 million revolving line of credit that can be used to pay debt service until the completion of construction of the entire project.

## V. Appraisal

### A. Strength of Proposers

*Fluor Project Team:* Fluor is essentially proposing an arrangement where the design/build teams are severally liable for completing their respective section of I-81. The downside to this arrangement is no single party will ultimately be responsible for completing the entire project, since Fluor Corporation is not assuming that liability and the other team members (or their guarantors) are not jointly and severally liable for project completion. This could introduce integration risk, resulting in parties blaming each other for non-performance, and it places a greater burden on VDOT to ensure that there are not inconsistencies with the implementation of the three roadway segments. However, the Fluor proposal does enable VDOT to diversify the completion risk across several experienced construction firms who are reasonably strong financially, although none of them are especially large. Given the size of the project, we suggest the following ways to lessen VDOT's exposure.

- *Require completion guarantees from the ultimate parent companies:* Obtaining parent guarantees from Peter Kiewit Sons Inc., in the case of Gilbert Southern Corp., and from Granite Construction Incorporated, in the case of Granite Construction Company, would improve the security. As Fluor Corporation is the ultimate parent, this is not an issue for them. Gilbert appears financially strong, although only one year of financial information was provided, but it only has assets of approximately $360 million. Peter Kiewit Sons Inc. has assets totaling almost $1.8 billion. As we discussed previously, Granite Construction Company comprises most all of Granite Construction Incorporated, as measured by both revenues and assets. Nevertheless, given the size of the project, we believe guarantees should be sought from the broadest possible asset base.

- *Break the project up into even smaller contractual units:* To further reduce its exposure, VDOT could consider breaking up each design/build team's work program into several smaller design/build contracts that could coincide with the phasing of the project. For example, Fluor breaks each team's work program into five phases and a separate design/build contract could govern each phase. This may be difficult to do, as some tasks are likely to span all phases and VDOT would be faced with administering many more contracts. Nevertheless, smaller design/build contracts would enable VDOT to match the contractual liability at any one time to the financial strength of the firm(s) performing the work and be better able to deal with any under-performance by the Fluor team.

- *Obtain the maximum amount of performance bond possible:* Based on information provided with the proposal, the project team members' have the ability to obtain performance. The question is whether a surety of sufficient size can be put in place, given that each design/build team's liability will be almost $2 billion. Fluor appears to have the most capacity, since the letter supplied on its behalf by its surety providers indicated that they have considered single projects up to $500 million. That would still only be roughly 25% of Fluor's potential liability. Letters supplied on behalf of Gilbert and Granite suggested that they would have a lower bonding capacity of $200 to $300 million. Breaking the project up into smaller contractual units, as was discussed above, would also help address any limitations in the level of bonding that could be provided at any one time.

*STAR Solutions:* Under the STAR Solutions proposal, KBR, Inc. is responsible for the project's completion, and according to VDOT, Halliburton would provide a parent guarantee. Halliburton is a very large company with total assets exceeding $14 billion. However, we are concerned about the impact the asbestos settlement could have on its future financial condition. While the settlement would resolve a potentially open-ended liability, it is costly and financing the $2.775 billion cash payment required to fund the settlement would likely erode its current cash position and require Halliburton to incur more debt. Other potential risks are potential adverse effects of the Chapter 11 filing of Kellogg Brown & Root, unfavorable resolution of project disputes with Petrobras and an adverse outcome in the SEC investigation.

VDOT should seek clarification about the relationship between KBR, Inc. and Kellogg, Brown & Root, given its plans to file for protection under Chapter 11. As was previously discussed, the proposed asbestos settlement agreement is to be implemented through a "pre-packaged" bankruptcy filing under Chapter 11 for certain Halliburton subsidiaries named as defendants in asbestos lawsuits, including Kellogg, Brown & Root. It is not clear whether a bankruptcy filing by Kellogg, Brown & Root would affect KBR, Inc.'s ability to perform under any agreement it reaches with CTB regarding I-81.

B. Financing Plan

*Tolls and Ability to Pay Debt Service:* Assuming FHWA and the General Assembly approve imposing tolls on an existing facility, the viability of the plan of finance is based on the creditability of the revenue projections. The revenue projections made by Vollmer Associates for Fluor and Wilbur Smith for STAR Solutions are preliminary in nature. The Vollmer report for Fluor projects car traffic growth of 3 percent a year for the first five years, 2.5 percent per year for the next five years and then 1 percent to 2 percent thereafter. STAR Solutions does not provide the traffic growth assumptions used by Wilbur Smith, but STAR Solutions assumes 1.0 percent to 2.0 percent growth after 2021. An issue that neither proposal addresses is the capacity of the roadway to meet these traffic projections without further additions. VDOT may want to have the proposers address any potential capacity constraints.

The traffic growth and toll increase scenarios drive the revenues available for debt service. The toll increases track inflationary increases in costs, assumed to be 3 percent. Although, 3 percent inflation is a reasonable assumption, if inflation averages under 3 percent, the revenues available for debt service will be reduced. The debt service for both proposals tracks the revenues. On both proposals, the senior bonds show 1.50 times coverage in every year. On the Fluor proposal, the subordinate bonds have debt service coverage in every year of 1.13 times and in the STAR Solutions proposal the subordinate TIFIA loan has coverage of approximately 1.20 times through 2040. Thus on both proposals, debt service increases at the same rate as the projected revenues, leaving little margin for lower traffic counts or inflation rates. In addition, both proposals structure the debt service to take into account the earnings on the debt service reserve fund and the release of the reserve fund at the final maturity of the respective bond issues, rather than having these revenues available for additional cushion.

Both proposals assume investment grade ratings but we believe the rating agencies are likely to have concerns about the toll revenue bond structures. Given the potential that actual traffic and toll revenues could be lower than forecasted, the rating agencies may require higher debt service coverage overall and increasing, rather than constant, debt service coverage in the later years. These changes could result in less debt capacity.

In order to reduce the risk of insufficient revenues, we would recommend two steps. First we believe it would be worthwhile to request an "investment grade" traffic report from one or both of the revenue consultants. At this stage usually a preliminary report is adequate. However, given the large size of this project and the complex steps needed to be taken prior to any financing, we believe that the time and expense for an investment grade study would be worth the additional insight gained, regarding verifying traffic and revenue estimates and the elasticity of demand. Second and based on the results of the investment grade traffic studies, we would recommend considering reducing the planned amount of debt to be issued to provide more cushion for reduced revenues. Any reduction in debt would make the ability to issue the debt easier and reduce vulnerability in the future. However, in order to reduce the issuance, either project costs would have to be reduced or other funding sources would have to be obtained.

*Alternate Funds:* The Fluor plan seeks no alternate funds other than publicly issued bonds. Fluor is therefore not relying on funds from the Commonwealth or the Federal government. The proposal has the risk of the ability to access the public capital markets for the funds needed, especially the $1.5 billion subordinate bonds showing only 1.13 times coverage.

STAR Solutions offers a more diversified mix of funds, but presents risks that they cannot be obtained. Chief among them are the $1.6 billion federal earmarks and $1.28 billion TIFIA loans. The Commonwealth would have control over whether it would contribute the required $98 million to the project. As in Fluor, it is not clear that the markets would purchase as much debt as proposed. In addition, the plan of finance relies on pay-as-you-go funding from net toll revenues in the amount of $901.7 million. This is a significant amount, comprising 11.3 percent of the total project cost. STAR Solutions does not address any contingency plans to fund project costs if traffic and revenue projections do not come in as anticipated

C. Risk Allocation

Under the proposed risk allocation in both proposals, the respective project teams will be taking the fixed construction price and completion date risk and offer payment and performance bonds and liquidated damages. The proposals provide estimates of the project cost and completion date, but a firm fixed price and completion date have not been set and many factors can change these estimates. In order to proceed, VDOT must have a basis for believing that these estimates are

reasonable and feel comfortable that the selected project team will negotiate a fair and reasonable fixed price and completion date. The project teams are also "at risk" for funds spent during the pre-development stage until the Comprehensive Agreement is signed. VDOT would also be at risk for its expenses on upfront development responsibilities, such as work on the NEPA process and getting tolling approved. VDOT will have ownership and maintenance responsibilities, unless it chooses the option offered by both teams to maintain the facility but at VDOT's expense. The respective proposers, however, would be responsible for the operation of the toll facilities and would be paid out of project revenues prior to debt service. The proposals do not discuss how these operation contracts would be structured, but presumably they would be "qualified management contracts" to preserve the tax-exempt status of the bonds. In addition, STAR Solutions offers the pavement warranty from Koch Performance Roads, Inc. There is also a potential for VDOT to be reimbursed for its operating expenses if there are toll revenues available after payment of toll operating costs, debt service and filling required reserves.

The revenue risk is primarily a bondholders risk, and in the case of STAR Solutions, this includes the federal government through the TIFIA program. The debt would be structured as non-recourse debt to the Commonwealth and VDOT and neither the Commonwealth nor VDOT is under any legal obligation to pay debt service. Fluor and STAR Solutions, subject to certain approvals, offer to share the revenue risk. Fluor states that it will consider taking a risk position to mitigate revenue realization risk, similar to what it did in the Pocahontas Parkway transaction where the joint venture offered a revolving line of credit to pay debt service in the event of insufficient revenues. STAR Solutions offers a $100 million revolving line of credit as a backstop for debt service until the completion of the entire project.

In both proposals, the plan of finance calls for pay-as-you-go funds to pay project costs. Fluor assumes $150 million and STAR Solutions assumes $901.7 million. If revenues are not sufficient, particularly in the STAR Solutions case, the funding gap will need to be addressed.

## Conclusion

The proposals offer a methodology for having improvements to the I-81 Corridor financed primarily by toll revenue bonds with minimum Commonwealth and VDOT funds. The PPTA Advisory Panel must decide whether the cost proposed by the project teams is competitive with a traditional procurement approach, given the advantages of transferring some of the risks and potentially having the improvements completed in a shorter time period.